

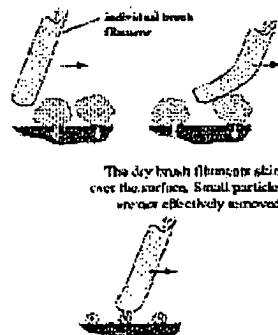
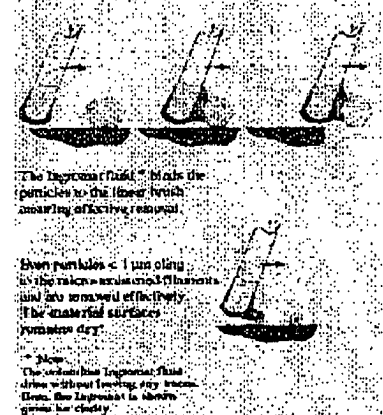
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REMARKS

Claims 39-42, 46-50, 53, 54, 58, 59, 71-74 and 78 are rejected under 35 U.S.C. 102(b) as anticipated by the Ingromat-Cleaner CH 29 ("Ingromat") or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ingromat in view of Herrington '413. The Applicant acknowledges and respectfully traverses all of the raised rejections in view of the following remarks.

As the Examiner is aware, in order to properly support an anticipation rejection under 35 U.S.C. 102(b), the cited reference must disclose, teach or at least suggest each and every feature of the presently claimed invention. It is important to understand that Ingromat is a device for cleaning a workpiece, not for "machining" or "working", e.g. removing scale or an oxide layer from a workpiece. This is of fundamental importance because Ingromat does not want to machine, work or disturb the actual workpiece itself, other than to lift dust, or other potential contaminants and micro-particles off the workpiece. In many instances, Ingromat's device does not even contact the surface of the workpiece, but merely sweeps or draws away the surface dust and contaminants using a liquid cleaner on a brush without touching the workpiece material.

As shown below, Ingromat uses one or more conveyor devices with brushes mounted to pass over a work surface and remove micro particles from that surface to prepare the workpiece for

Disadvantages (conventional methods)**Ingromat process****Advantages: with Ingromat™ (pat pend.)**

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ensuring contact between the at least one brush (3) of the first, the second, the third and the fourth conveyor devices (2, 2, 2, 2) along the entire respective first and second surface of the workpiece.

77. (CANCELED)

78. (PREVIOUSLY PRESENTED) An apparatus for machining a metallic workpiece, being one of strip or plate form and having first and second opposed main surfaces, for at least one of removing an oxide layer from a surface, grinding a surface or an edge and treating or deburring a surface or edge of at least one of the first and the second main surfaces of the workpiece, the apparatus comprising:

a first and a second conveyor devices (2, 2) and each of the first and second conveyor devices (2, 2) has at least one brush (3) guided at least approximately linearly past a region of the workpiece (1) to be machined transversely with respect to an advance direction of the workpiece (1);

the first and second conveyor devices (2,2) rotate in opposite directions and are positioned for respectively treating the first and second main surface of the workpiece (1); and

the first and second conveyor devices (2, 2) both rotate so as to guide the brushes (3) along an entirety of the first and second main surface of the workpiece.

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further finishing, such as; silicon wafers to be used as integrated circuits, or newly manufactured car parts that are then painted and surface treated. These devices use an electro-static fluid to wet the brushes, the wet brushes are then passed over the surface of the workpiece and micro particles are pulled from the surface and adhered to the brushes, leaving the workpiece dry and intact; the optimal objective for the cleaning process in these types of manufacturing applications.

The word "machining" is a very well known series of specific metal working process and is defined in Wikipedia by the following:

Machining is a collection of material working processes that involve using power driven machine tools, such as lathes, milling machines, and drill presses, to shape metal or plastic by removing excess material.

The objective of leaving the surface intact and undisturbed in Ingromat is fundamentally and entirely structurally and functionally different than Herrington '413 and Applicant's disclosure where each brush of the conveyor device is intended to uniformly machine, grind or work the surface removing an oxide layer and/ or other burrs or imperfections. This feature of contacting and working the surface of a material is clearly different from the wet brush particle removal system of Ingromat for cleaning the surface without disturbing or modifying in any way the underlying material.

In this regard, claim 1 currently recites "An apparatus for machining a metallic workpiece" in the preamble. Again, Ingromat does not disclose any machine or device for machining a workpiece, metal, plastic or otherwise, just cleaning it. Neither does Ingromat disclose, teach or suggest "...removing an oxide layer from a surface, grinding a surface or an edge and treating or deburring a surface or edge of at least one of the

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first and the second main surfaces of the workpiece " as also recited in pending claim 1. Since Ingromat does not disclose, teach or suggest at least the claimed feature of "machining" or "grinding" the workpiece, either expressly or inherently, the Applicant believes claim 1 to be allowable.

Claim 1 also recites "...treating the first main surface of the workpiece (1)" and "...treating the second main surface of the workpiece (1)" which in the context of machining are also not disclosed by the cleaning device of Ingromat. If the Examiner believes that the term "machining" rather than "treating" of the workpiece surfaces is more appropriate, and would place the case in condition for allowance, the Applicant would certainly consider amending the claim in such a manner. But the recitations and features of the claim as currently set forth clearly distinguish this claim over the cited Ingromat reference.

With respect to the obviousness rejections, as the Examiner is also aware, in order to support an obviousness rejection under 35 U.S.C. 103(a) the cited references must have some disclosure or teaching which would lead one of skill in the art to combine these references in the manner as suggested in the Official Action. As noted above, where Ingromat is merely for cleaning a surface without structurally working the workpiece, Herrington `413 is intended to machine or work the surface of the workpiece to remove scale, for example oxidation or rust on the workpiece. These are entirely and fundamentally different devices and functions machining changes the structural characteristics of a metal surface, and cleaning merely cleans the surface.

The Official Action states that "...it would have been obvious to one of skill in the art at the time the invention was made to provide the brushes of the Ingromat apparatus

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with the bristles disclosed by Herrington to allow the Ingromat reference to remove oxide layers from a large area of both the first and second main surfaces of a workpiece at the same time..." Herrington '413 discloses using wire fibers 52 as seen in Fig. 5 and then work the surface of the material, however by replacing the brushes on Ingromat with metallic fibers or bristles that would engage with and mar the surface of the workpiece, this would destroy the material both structurally and functionally based on the disclosure and teachings of Ingromat. In fact, the fundamental differences between cleaning and machining in these references teaches away from any such combination and therefore the only basis for such a combination is based merely on conjecture and hindsight and not by any teaching in the combined references or prior art. As claims 40-44 are dependent either directly or indirectly on claim 39 which is believed allowable for the reasons set forth above, the Applicant believes these claims to be allowable as well.

Similarly, independent claims 46 and 78 also include the same feature of "machining a metallic workpiece" and claim 76 includes the step of "machining a metallic workpiece", thus for the same reasons as set forth above, the relative claims 46-78 and are also believed to be allowable.

The Applicant has also amended claim 39 to include the recitation that, "...the first, second, third and the fourth conveyor devices (2, 2) rotate so as to guide the brushes (3) along an entirety of a *length available for the workpiece to pass through*. Specifically, Ingromat does not disclose the brushes of each conveyor extending the entire length available for the workpiece to pass through as shown in Applicant's figures and as discussed at least at paragraph 070 of the Applicant's specification. Ingromat

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does disclose a version of their cleaner which has brushes extending the entire length of the space available for the material however these brushes are all rotating the same direction on respective sides of the workpiece. Claim 39 has also been amended to replace the previously deleted phrase "one of obliquely or".

Claim 46 as previously presented was rejected because the Examiner claimed that the Ingromat reference displayed an offset between the conveyor devices. As previously stated in earlier remarks, there is no clear reference that the conveyor devices are offset from one another on each side of the Ingromat device and since the wet-brush system puts no pressure on the surface of the workpiece the advantages of the Applicant's disclosure of offset in removing interference between the brushes on either side of the workpiece and in balancing the workpiece to prevent tilting are not apparent in the Ingromat reference.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised anticipation and obviousness rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Ingromat-Cleaner CH29 publication, Herrington '413, McCormick et al. '882 and Derby '166 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field,

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the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



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